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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------------|------------------------|
| 10/702,319 | 11/06/2003 | Ranjan Perera | ARBG-004/07US 307197-2038 | 7997 |
| 58249 7590 02/28/2008 COOLEY GODWARD KRONISH LLP ATTN: Patent Group Suite 1100 777 - 6th Street, NW WASHINGTON, DC 20001 | | | EXAMINER QIAN, CELINE X | |
| | | | ART UNIT 1636 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/702,319 | Applicant(s) PERERA ET AL. | |
| | Examiner CELINE X. QIAN | Art Unit 1636 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 2-11 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-11, 15-18 are pending in the application.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/07 has been entered.

EXAMINER'S AMENDMENT

The rejection of claim 1 under 35 U.S.C. 112 1st paragraph has been withdrawn in light of the amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-11, 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 2, it recites complements of nucleotides for SEQ ID NO: 12, 60, 1-1643 of SEQ ID NO:113, and fragments thereof. The specification does not disclose

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any of these complements that still possess promoter function. The art teaches that most promoter functions unidirectionally. The specification does not teach the claimed complementary sequence of fragments of SEQ ID NO:113 that function as a promoter in any host cell. Therefore, the written description requirement is not satisfied. Claims 3-11, 17 and 18 are rejected for same reason because they depend on claim 2.

Regarding claim 18, it recites a polynucleotide that comprises a 20-mer...600-mer of a sequence recited in claim 1 or 2. As discussed in previous office action, the specification does not disclose any 20-mer, 40, 60, 80, 100-mer that has a functional vascular tissue specific *E. grandis* cOMT promoter function. The shortest sequence that has the claimed promoter function is 1525-1643 of SEQ ID NO: 113, and all fragments that have promoter function all comprise this sequence. As such, the specification fails to describe any of the 20-100 mer of SEQ ID NO: 113 that have the promoter function. Therefore, the written description requirement is not met.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 15, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, the recitation of "wherein the DNA sequence of interest is presented in sense and anti-sense orientation" renders the claim indefinite because it is unclear how a sequence can be in sense and anti-sense orientation at the same time.

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Regarding claim 15, the recitation of "a method for identifying a gene responsible for a desired function or phenotype...wherein the gene encodes a polypeptide involved in secondary cell wall formation" renders the claim indefinite because it is unclear whether this gene to be identified is an endogenous gene of the plant or part of the transgene that is introduced into the plant. Further, claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. The claim only recites the introduction of a construct to a plant cell that comprise a sequence that comprises the *E. grandis* cOMT promoter (SEQ ID NO: 113 as recited in claim 1), which itself may not have promoter function, or fragments of SEQ ID NO:113 (as recited in claim 2), which do have promoter function. However, it is unclear how introduction of the promoter sequences or a sequence that comprises the promoter sequence to a plant would result in a phenotypic change that is indicative of a gene that is involved in secondary wall formation. As such, the metes and bounds of the claim cannot be established. Claim 16 is rejected because it depends on claim 15.

Regarding claim 18, the recitation of "a 20 mer-...600-mer of a sequence recited in claim 1 or claim 2" renders the claim indefinite because one of the sequence of claim 2, 1525-1643 of SEQ ID NO:113, is only 119 bp in length, such that it cannot comprise a 120-mer...600-mer. As such, the metes and bounds of the claim cannot be established.

Conclusion

Claim 1 is allowable.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to CELINE X. QIAN whose telephone number is (571)272-0777. The examiner can normally be reached on 10-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Woitach Ph.D. can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Celine X Qian Ph.D.
Primary Examiner
Art Unit 1636

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Primary Examiner, Art Unit 1636

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